

IN THE CLAIMS:

1. (Currently amended) A storage system apparatus, comprising:
a first storage system for storing data, and a second storage system remote from the first storage volume for storing a remote mirror copy of the data;
a plurality of ports, providing switch-able connection from said first storage system via a plurality of networks to said second storage system, said plurality of networks including a first network and a second network, said first network having a higher priority than said second network; and
a processor;
wherein said processor selects at least one of said plurality of ports to send data from the first storage system to the second storage system, said selection based upon a comparison of at least one condition in said plurality of networks against at least one user provided policy.
2. (Previously presented) The storage system apparatus of claim 1, wherein said at least one condition comprises at least one of a throughput, a busy rate, an error rate, and a presence of an error.
3. (Previously presented) The storage system apparatus of claim 1, further comprising a plurality of status indications, said plurality of networks each having at least one of said plurality of status indications associated therewith; and wherein said processor determines based upon said status indications whether to select a port from said plurality of ports.
4. (Previously presented) The storage system apparatus of claim 3, further comprising a network monitor, said network monitor operable to detect a condition within at least one of said plurality of networks, and thereupon set said status indication.
5. (Original) The storage system apparatus of claim 3, wherein said status indication comprises at least one of available, temporarily unavailable, and unavailable.

6. (Original) The storage system apparatus of claim 1, wherein said policy comprises at least one of a threshold, a maximum, a minimum, an average, a mean, a limit, a constraint, a priority, and a target.

7. (Original) The storage system apparatus of claim 1, wherein said plurality of networks are grouped into a plurality of path groups, wherein said policies are associated with networks in a particular path group.

8. (Previously presented) The storage system apparatus of claim 7, wherein said first storage system and said second storage system comprises a plurality of volumes.

9. (Previously presented) The storage system apparatus of claim 8, wherein each of said plurality of volumes is permitted to access networks of at least one of said plurality of path groups.

10. (Currently amended) A method ~~for minimizing cost of network access by a storage apparatus, said method~~ comprising:

storing data in a primary storage volume;

specifying a first network to be used for transferring remote mirror copy data from the primary storage volume to a secondary storage volume remote from the primary storage volume;

specifying a first-network-based constraint for said first network;

specifying a second network to be used for transferring the remote mirror copy data from the primary storage volume to the secondary storage volume;

making said first network a higher priority network than said second network; and

transferring said remote mirror copy data using said first network when conditions in said first network are in accordance with said first-network-based constraint, otherwise transferring said remote mirror copy data using said second network.

11. (Previously presented) The method of claim 10, further comprising:
transferring a portion of said data using said first network even when conditions
in said first network are not in accordance with said constraint as a test;
monitoring conditions in said first network during said test; and
returning to transferring said remote mirror copy data using said first network
when said test reveals that conditions in said first network are again in accordance with said
constraint.

12. (Original) The method of claim 10, wherein said first network is
relatively less expensive to use than said second network.

13. (Original) The method of claim 10, wherein specifying said constraint for
said first network comprises specifying at least one of a throughput, a busy rate, an error rate,
and a presence of an error.

14. (Original) The method of claim 10, wherein said first network is a public
network and said second network is a private network.

15. (Currently amended) The method of claim 10, wherein said first network
is a private network and said second network is a public network ~~further comprising:
making said first network a higher priority network than said second network.~~

16. (Original) The method of claim 10, further comprising:
detecting an abnormal condition in said first network and thereupon transferring
data using said second network.

17. (Currently amended) A method for selecting a network, said method
comprising:
providing primary storage for storing data;

providing secondary storage remote from the primary storage for storing a copy of the data, the secondary storage being coupled to the primary storage via a plurality of networks, the plurality of networks including a first network and a second network, the first network having a higher priority than said second network;

monitoring at least one condition in the plurality of networks;

comparing said at least one condition against at least one user provided policy;

and

selecting at least one of a plurality of ports connected to said plurality of networks in accordance with said comparison.

18. (Previously presented) The method of claim 17, wherein the selecting of at least one of a plurality of ports comprises:

determining based upon a status indication whether to select a port from said plurality of ports.

19. (Previously presented) The method of claim 17, further comprising:
associating said plurality of networks with a plurality of path groups;
wherein said policy is associated with at least one of a plurality of path groups.

20. (Previously presented) The method of claim 17, wherein the monitoring of a condition comprises:

using a network monitor to detect a condition within at least one of said plurality of networks, and thereupon set a value in a status indication.